SERIAL NO. 3102

ONKYO® SERVICE MANUAL

SUPER SERVO INTEGRATED STEREO AMPLIFIER MODEL A-35

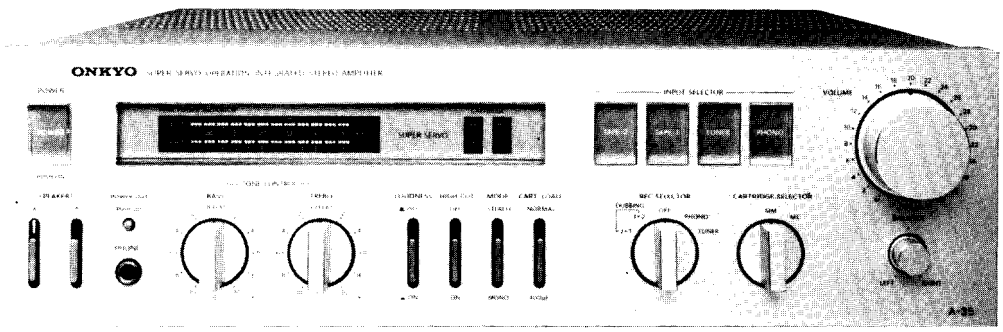


TABLE OF CONTENTS

Item	Page
Specifications	2
Block diagram	2
Precautions	4
Circuit description	4
Component location	6
Exploded view	7
Parts list	7
Printed circuit board-parts list	9
Schematic diagram	11
Printed circuit board view from component side	13
Packing procedures	16

ONKYO® AUDIO COMPONENTS

SPECIFICATIONS

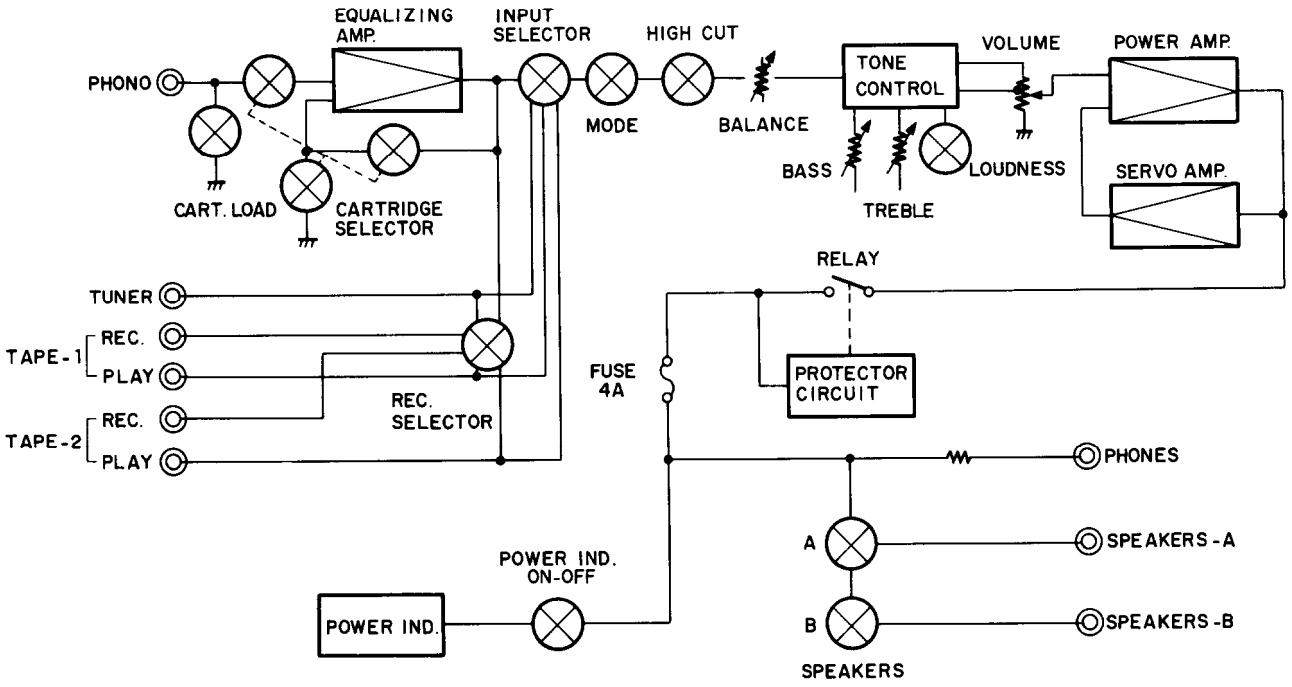
Power Output:	55 watts per channel min. RMS, at 8 ohms both channels driven, from 20 Hz to 20 kHz, with no more than 0.02% THD.
Total Harmonic Distortion:	0.02% at rated power
IM Distortion:	0.02% at rated power
Damping Factor:	40 at 8 ohms
Frequency Response:	2 – 50,000 Hz ± 1 dB
RIAA Deviation (MM):	20 – 20,000 Hz ± 0.5 dB
Sensitivity and Impedance:	Phono (MM): 2.5 mV/50 kohms (MC): 350 μV/330 ohms Tuner: 150 mV/50 kohms Tape Play: 150 mV/50 kohms Tape Rec: 150 mV/1 kohms (phono)
Phono Overload:	180 mV RMS at 1 kHz, 0.02% THD.
Bass Control:	±8 dB at 70 Hz
Treble Control:	±8 dB at 10,000 Hz
Signal to Noise Ratio:	Phono (MM): 80 dB (IHF A-202, 5 mV input, 1 watt output) (MC): 67 dB (IHF A-202, 0.5 mV input, 1 watt output) Tuner & Tape: 84 dB (IHF A-202, 0.5 V input, 1 watt output)
Loudness:	+7 dB at 70 Hz +5 dB at 10 kHz
High Cut Filter	6 kHz (6 dB/oct)

General

Semiconductors:	6 ICs, 32 transistors, 27 diodes, 28 LEDs
Dimensions:	418(W) x 125(H) x 392(D) mm 16-1/2" x 4-15/16" x 15-7/16"
Weight:	8.8 kg. (19.4 lbs.)
Power Supply:	AC 220 V, 50 Hz (G model) AC 120 V, 60 Hz (D model) AC 120/220 V, 50/60 Hz (Universal model)

Specifications and features are subject to change without notice.

BLOCK DIAGRAM



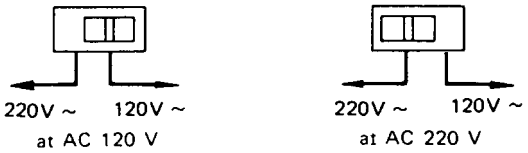
PRECAUTIONS

1. **For continued protection against fire hazard, replace only with same type and same rating fuse.**

CIRCUIT NO.	PARTS NO.	DESCRIPTION	REMARKS
F301, F401	252059	4A (SS-2), Speaker protection fuse	120/220V model
F901	252049	4A (ST-6), AC fuse	120V model
F901	252074	2A-SE-EAK, AC fuse	220V model
F903, F904	252078	5A-SE-EAK, AC fuse	220V model
F301, F401	252014	4A-T, Speaker protection fuse	Universal model
F901	252014	4A-T, AC fuse	Universal model
F902	252002	2A-T, AC fuse	Universal model

2. **Replacement for differential, driver, complementary and power amplifier transitors, if necessary, must be made from the same beta (h_{FE}) group as the original type.**

3. Voltage Selector (rear panel)
   Some models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on. Voltage is changed by sliding the groove in the switch with a screwdriver or similar instrument to the right or left position. Confirm that the switch has been moved all the way to the right or left before turning the power switch on. If there is no voltage selector switch on the unit you have purchased, it can only be used in areas where the power supply voltage is the same as that of the unit.



CIRCUIT DESCRIPTION

Dual Super-Servo

Onkyo's super-servo amp using ultralow frequency feedback servo circuits consisting of high-performance operational amplifiers has completely done away with a number of problems that have heretofore plagued amplifiers. These include distortion caused by capacitors used in the signal path, internally generated noise in the ultralow frequency range, and a lack of frequency response in the low ranges caused by record warp and tonearm resonance. Frequency response and tonal quality is as never before. The newly developed dual super-servo system has an additional function over our previous super-servo amp. That additional function may be noted by looking at the accompanying series of illustrations. First note the commonly used unbalanced NF amp depicted in Fig. 1 where the signal is input at point A as referenced to point B, and output at point C as referenced to point B. Common input/output reference in amplifiers is an ideal, but in fact difficult to attain. This is particularly true in power amps with high output current; unless impedances are matched, it is next to impossible. In Fig. 2, very small impedances are present at the same time return current is flowing from other circuits, thus the circuit in Fig. 2 may be considered equivalent to that of Fig. 3. Up to now, in order to lower these unnecessary impedances, large diameter wiring and busbar grounds have been used with some

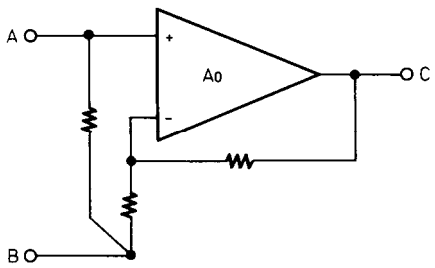


Fig. 1

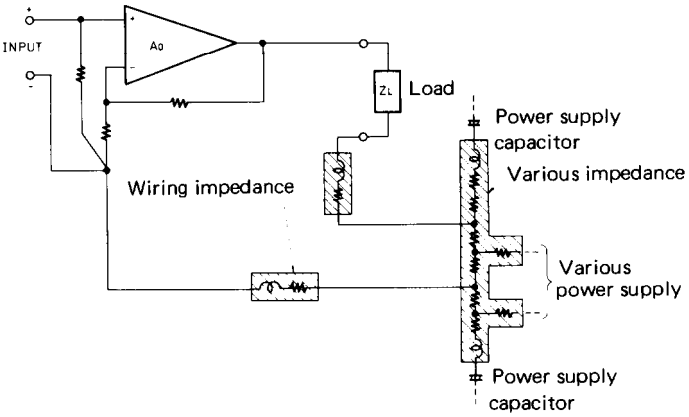


Fig. 2

degree of effectiveness, however we have improved upon these methods. Looking at the problem from another angle, the dual super-servo solves the problem without improvisions. As noted in Fig. 4, by applying a super-servo to the positive side, and with a servo return on the negative side, unnecessary signal components are equalized, consequently cancelled. And because the same potential exists, ground potential between input and output is the same. Put another way, in Fig. 5 and 6 the unnecessary components generated between input and output are short-circuited by the servo-circuit. Next, with separate amps, generally the preamp and main amp have been thought of as separate entities. A number of amp combinations have been used, but here again compatibility, or the lack of, may be attributed to ground potential in most cases. Also in the cables connecting 2 amps, there is cord impedance, contact resistence at the pin connector and wiring impedance to contend with, and even though the pin connectors are separated left from right, they became common via the power amp ground. This results in crosstalk between the left and right channel, poor channel separation, duller sound resolution and presence. And any difference in the ground potential between the preamp and power amp is detected and equalized by the servo. This is equal to the grounds of both amps being directly connected.

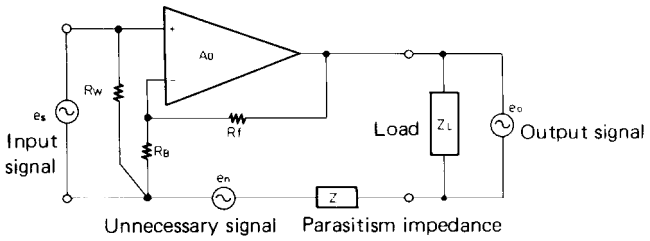


Fig. 3

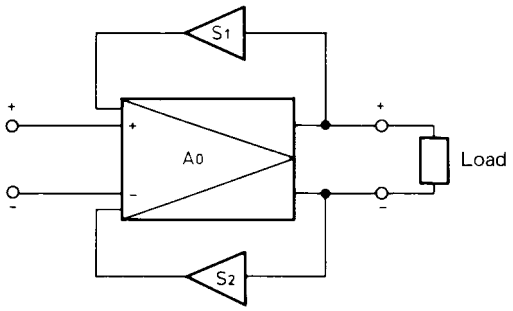


Fig. 4

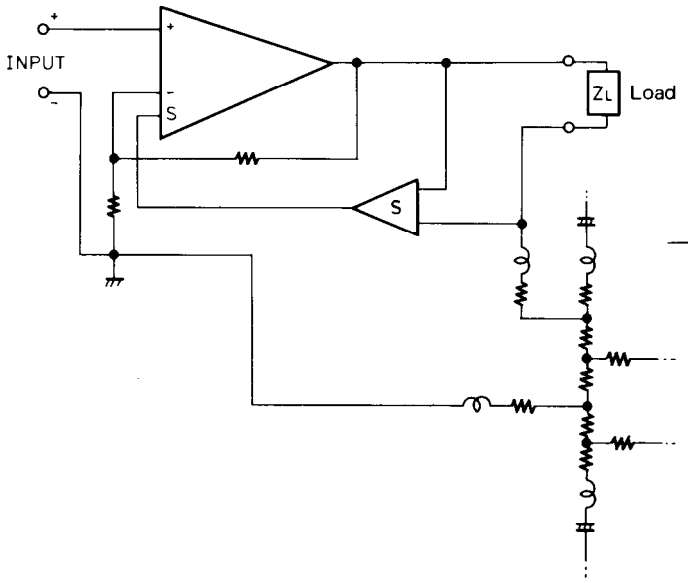


Fig. 5

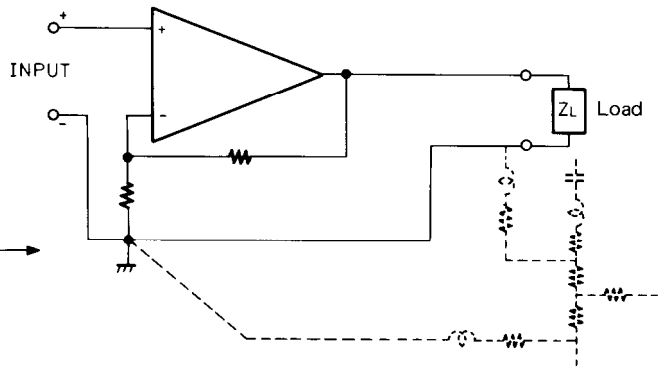
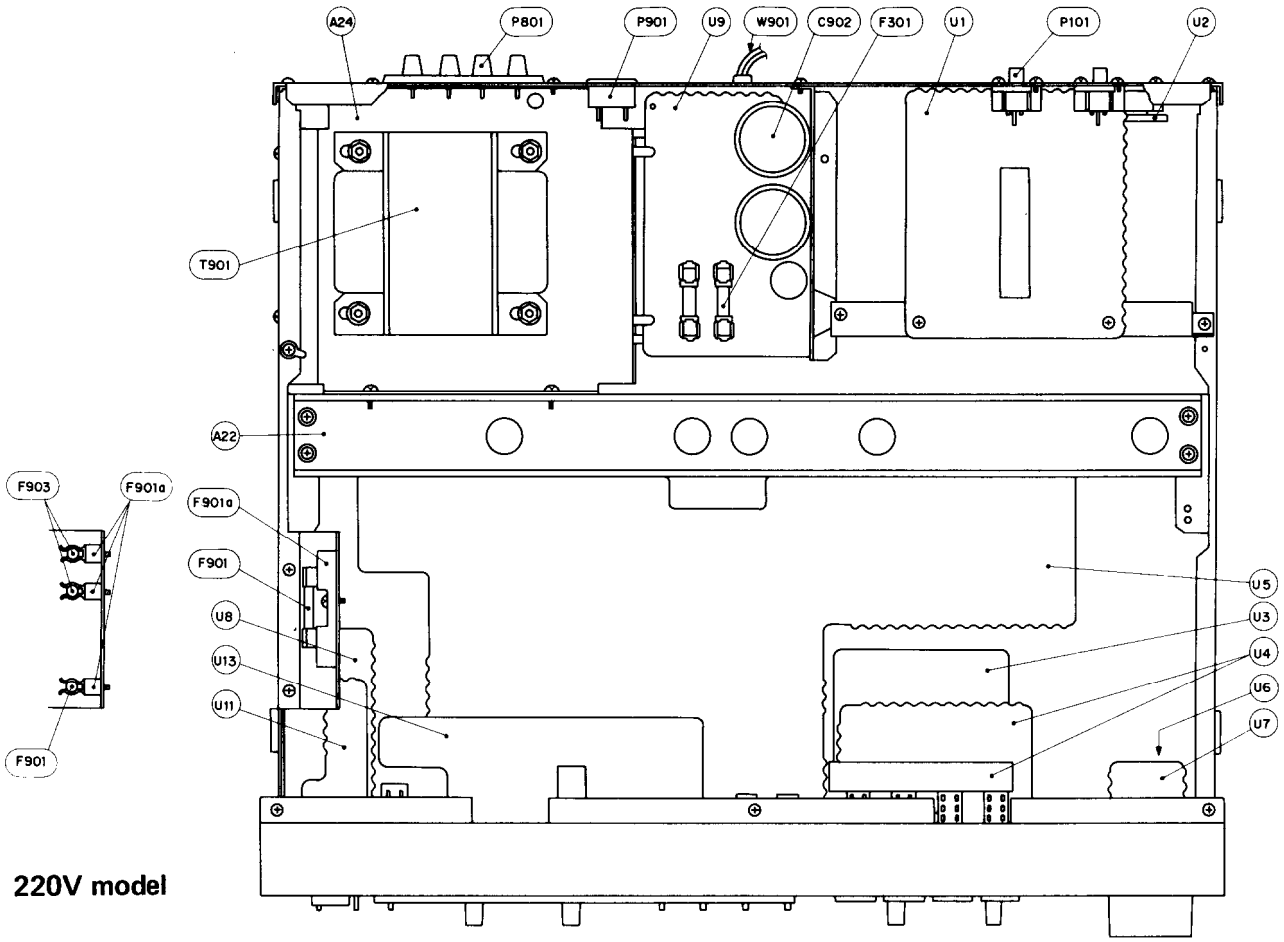
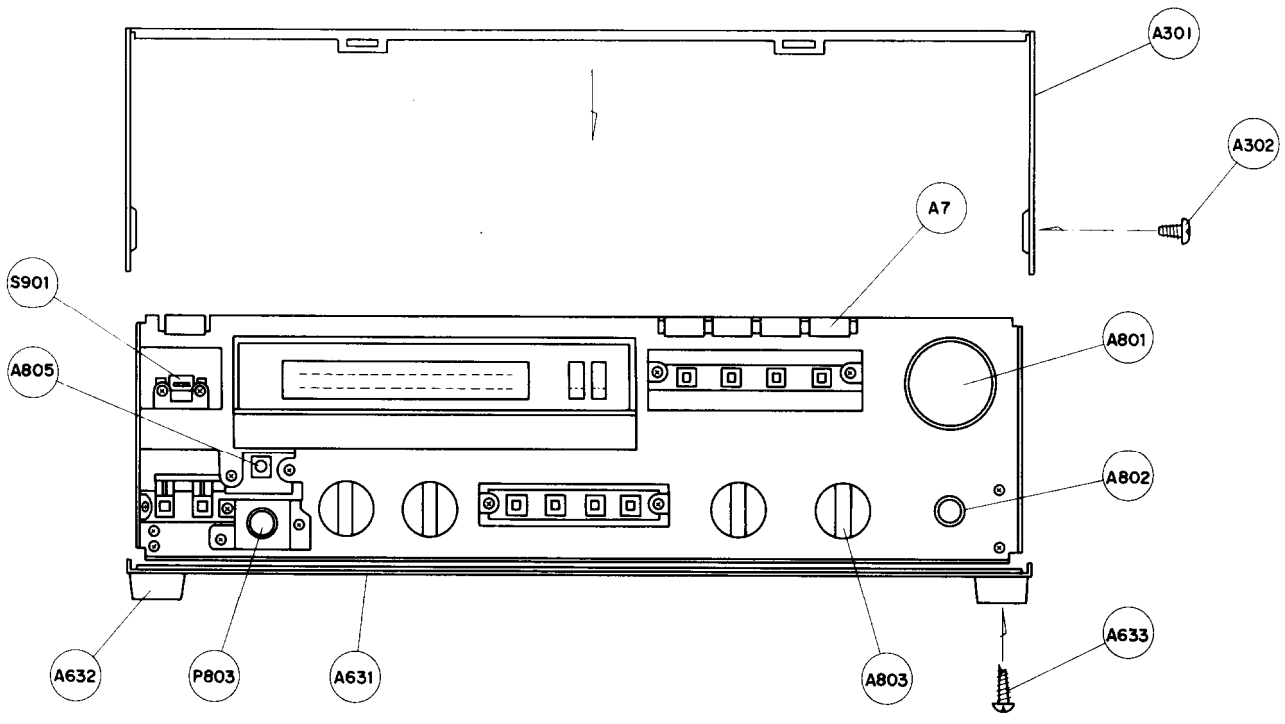


Fig. 6

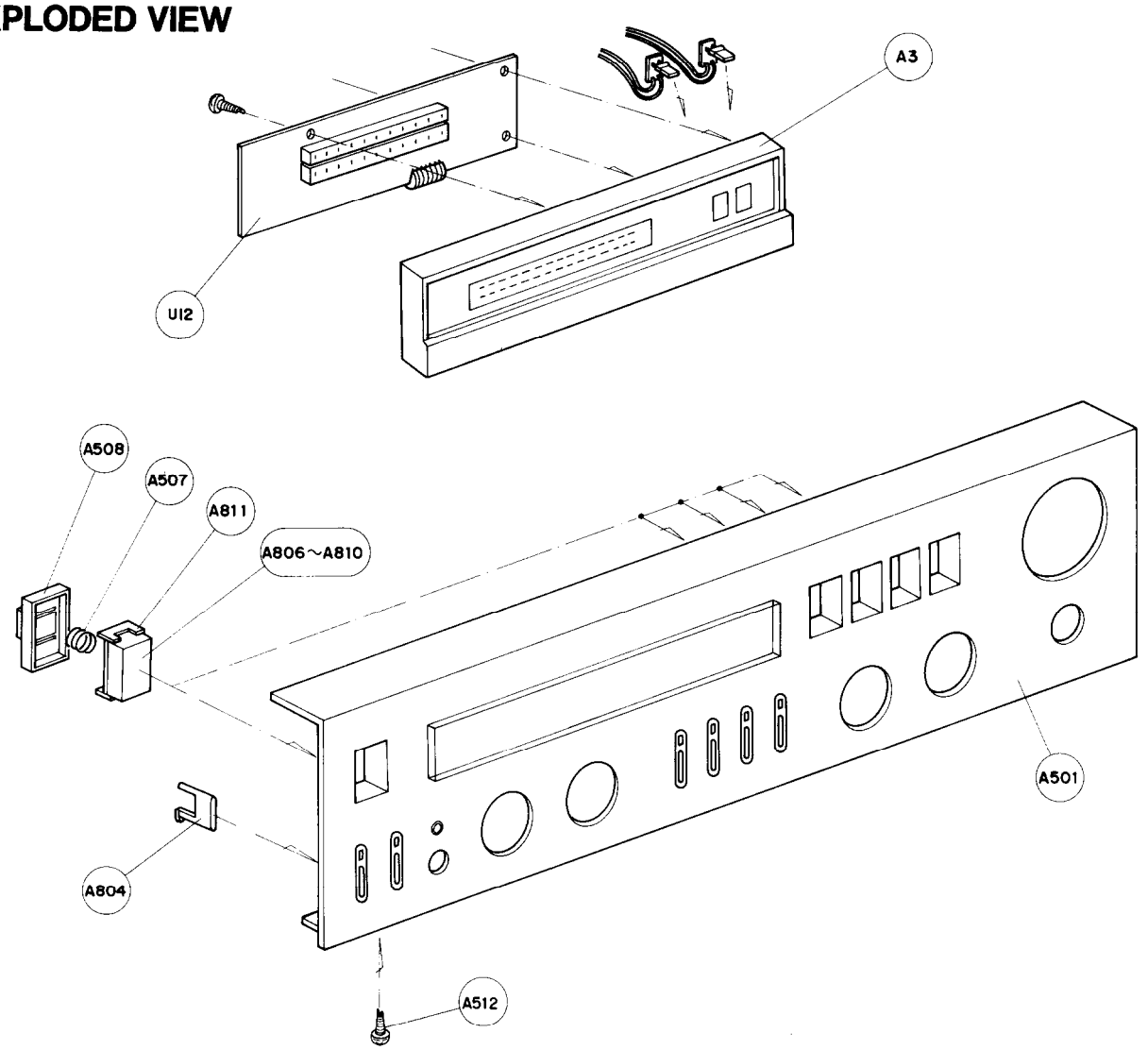
COMPONENT LOCATION



220V model



EXPLODED VIEW



PARTS LIST
D model (120V model)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
A1	27110131	Bracket, front
A2	27140489	Bracket, headphone
A3	12549901	Holder ass'y
A7	27300402	Guide, lamp
A9	27150130	Plate, shielded
A10	28199049	Film
A11	82113006	3P+6F-N, Pan head screw
A12	834130062	3STS+6BQ, Tapping screw
A13	833130080	3TTP+8P, Tap screw
A14	831130082	3STW+8BQ, Tapping screw
A20	27115043D	Bracket, side
A21	27115086	Bracket, side
A22	27160089	Radiator
A23	223012	Bracket, transistor
A24	27130148	Bracket, power transformer
A25	27150096C	Plate, shielded
A26	27140490	Bracket, pc board
A27	27140491	Bracket, fuse
A35	831130082	3STW+8BQ, Tapping screw
A36	834130062	3STS+6BQ, Tapping screw
A37	834140102	4STS+10BQ, Tapping screw
A38	838440109	4TTB+10C(BC), Tap screw
A39	871440	SW-4, Washer
A40	86414010	WN4x10FN, Nut
A41	833130062	3STP+6BQ, Tapping screw
A42	82113010	3P+10FN, Pan head screw

CIRCUIT NO.	PARTS NO.	DESCRIPTION
A43	834130102	3STS+10BQ, Tapping screw
A48	27120288	Back panel
A49	834130062	3STS+6BQ, Tapping screw
A50	834130102	3STS+10BQ, Tapping screw
A51	834230202	3STS+20BQ(NI), Tapping screw
A301	28184111	Top cover
A302	838440089	4TTB+8C(BC), Tap screw
A303	834130082	3STS+8BQ, Tapping screw
A304	28140020	4x10x40mm, Cushion
A501–A506	12549121	Front panel ass'y
A502	28191081	Clear plate
A503	27267101	Guide, speaker
A504	27267102	Guide, push
A505	27267103	Guide, switch
A506	27267104	Guide, knob
A507	28180079	Spring
A508	27267105A	Guide, cover
A509	28199045	16x10mm, Film
A512	834130062	3STS+6BQ, Tapping screw
A631	27170102	Bottom board
A632	27175009A	Leg
A633	834130162	3STS+16BQ, Tapping screw
A634	831130082	3STW+8BQ, Tapping screw
A801	28320527	Knob, volume
A802	28320528	Knob, balance
A803	28320529	Knob, selector

CIRCUIT NO.	PARTS NO.	DESCRIPTION
A803a	801146	Screw
A804	28320530	Knob, push
A805	28320536	Knob, switch
A806	28320531	Knob, power
A807	28320532	Knob, phono
A808	28320533	Knob, tuning
A809	28320534	Knob, tape 1
A810	28320535	Knob, tape 2
A811	28320537	Knob, base
C901, C902	3504157	15,000μF, 50V, Elect. capacitor
C921	3500060	0.01μF, 125V, Capacitor, CS
C921a	27300080	Cover for C921
F301, F401	252059	4A (SS-2), Speaker protection fuse
F901	252049	4A (ST-6), AC fuse
F901a	25050050	H0438A, Fuseholder
F901b	29360467	Label, fuse
P801, P802	25060038	NTM-4PRMN09, Speaker terminal
P803	250450067	HLJ-0279-01-070, Stereo headphone jack
P804	25060044	Terminal, ground
P901, P902	25050046A	NSCT-2P-15, AC outlet
Q308, Q408	2211255 or 2211256	2SC1815(GR) or 2SC1815(BL), Transistor, thermal detector
Q310, Q410	2201103 or 2201102	2SD845(O) or 2SD845(Y), Transistor, power amplifier
Q311, Q411	2201093 or 2201092	2SB755(O) or 2SB755(Y), Transistor, power amplifier
S101b	25030189	NRSM-102-30UB, Cartridge selector switch
S801	25035257	NPS-122-L221, Power indicator switch
S901	25035047	NPS-111-L12P, Power switch
T901	230481	NPT-739D, Transformer, power
U1	12549573	NAEQ-1073, Equalizer amplifier pc board ass'y
U2	12549574	NAPJ-1074, Tape input/output terminal pc board ass'y
U3	12549575	NASW-1075, Rec. selector switch pc board ass'y
U4	12549576	NASW-1076, Input selector pc board ass'y
U5	12549577	NAAF-1077, Pre., and power amplifier pc board ass'y
U6	12549578	NAVR-1078, Balance control pc board ass'y
U7	12549579	NAVR-1079, Volume control pc board ass'y
U8	12549580	NASW-1080, Speaker selector pc board ass'y
U9	12549581	NAPS-1081, Power supply pc board ass'y
U10	12549582	NALED-1082, Speaker indicator pc board ass'y
U11	12549583	NASW-1083, Switch circuit pc board ass'y
U12	12549585	NADIS-1085, Output power indicator pc board ass'y
U13	12549586	NAME-1086, Output power indicator driver circuit pc board ass'y
U14	12549587	NALED-1087, Cartridge selector indicator pc board ass'y
W901	253099A	AS-UC-3, Power supply cable
W901a	270025	SR-3P-4, Strainrelief

G/W model

CIRCUIT NO.	PARTS NO.	DESCRIPTION
A1	27110131	Bracket, front
A2	27140489	Bracket, headphone
A3	12549901	Holder ass'y
A7	27300402	Guide, lamp
A9	27150130	Plate, shielded
A10	28199049	Film
A11	82113006	3P+6F-N, Pan head screw
A12	834130062	3STS+6BQ, Tapping screw
A13	833130080	3TTP+8P, Tap screw
A14	831130082	3STW+8BQ, Tapping screw
A20	27115043D	Bracket, side
A21	27115086	Bracket, side
A22	27160089	Radiator
A23	223012	Bracket, transistor
A24	27130148	Bracket, power transformer
A25	27150096C	Plate, shielded
A26	27140490	Bracket, pc board
A27	27140491	Bracket, fuse
A35	831130082	3STW+8BQ, Tapping screw
A36	834130062	3STS+6BQ, Tapping screw
A37	834140102	4STS+10BQ, Tapping screw
A38	838440109	4TTB+10C(BC), Tap screw
A39	871440	SW-4, Washer
A40	86414010	WN4x10FN, Nut
A41	833130062	3STP+6BQ, Tapping screw
A42	82113010	3P+10FN, Pan head screw
A43	834130102	3STS+10BQ, Tapping screw
A48	27120289	Back panel(G)
	27120291	Back panel(W)
A49	834130062	3STS+6BQ, Tapping screw
A50	834130102	3STS+10BQ, Tapping screw
A51	834230202	3STS+20BQ(NI), Tapping screw
A301	28184111	Top cover
A302	838440089	4TTB+8C(BC), Tap screw
A303	834130082	3STS+8BQ, Tapping screw
A304	28140020	4x10x40mm, Cushion
A501–A506	12549121	Front panel ass'y
A502	28191081	Clear plate
A503	27267101	Guide, speaker
A504	27267102	Guide, push
A505	27267103	Guide, switch
A506	27267104	Guide, knob
A507	28180079	Spring
A508	27267105A	Guide, cover
A509	28199045	16x10mm, Film
A512	834130062	3STS+6BQ, Tapping screw
A631	27170102	Bottom board
A632	27175009-1	Leg
A633	834130162	3STS+16BQ, Tapping screw
A634	831130082	3STW+8BQ, Tapping screw
A801	28320527	Knob, volume
A802	28320528	Knob, balance
A803	28320529	Knob, selector
A803a	801146	Screw
A804	28320530	Knob, push
A805	28320536	Knob, switch
A806	28320531	Knob, power
A807	28320532	Knob, phono
A808	28320533	Knob, tuning
A809	28320534	Knob, tape 1
A810	28320535	Knob, tape 2
A811	28320537	Knob, base
C901, C902	3504157	15,000μF, 50V, Elect. capacitor
C921	3500058	PME265MB510, Capacitor, IS(G)
C921, C922	3500058	PME265MB510, Capacitor, IS(W)
F301, F401	252059	4A(SS-2), Speaker protection fuse(G)
F301, F401	252014	4A-T, Speaker protection fuse (W)
F901	252074	2A-SE-EAK, AC fuse(G)
F903, F904	252078	5A-SE-EAK, AC fuse(G)
F901	252014	4A-T, AC fuse(W)
F902	252002	2A-T, AC fuse(W)
F901a	25065096	NPF073, Fuseholder(G)
F901a, F902a	25050050	H0438A, Fuseholder(W)
F901b	29360364	Label, fuse(G)
F903b, F904b	29360419	Label, fuse(G)
F901b	29360467	Label, fuse(W)
F902b	29360435	Label, fuse(W)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
P801, P802	25060038	NTM-4PRMN09, Speaker terminal
P803	250450067	HLJ-0279-01-070, Stereo headphone jack
P804	25060044	Terminal, ground
P903	25055040	CV-K-2, Conversion plug(W)
Q308, Q408	2211255 or 2211256	2SC1815(GR) or 2SC1815(BL), Transistor, thermal detector
Q310, Q410	2201103 or 2201102	2SD845(O) or 2SD845(Y), Transistor, power amplifier
Q311, Q411	2201093 or 2201092	2SB755(O) or 2SB755(Y), Transistor, power amplifier
S101b	25030189	NRSM-102-30UB, Cartridge selector switch
S801	25035257	NPS-122-L221, Power indicator switch
S901	25035176	NPS-111-L140P, Power switch
S902	25065109	NSS-22557, Voltage selector switch
T901	230482	NPT-739G, Transformer, power (G)
	230483	NPT-739DG, Transformer, power(W)
U1	12549573	NAEQ-1073, Equalizer amplifier pc board ass'y
U2	12549574	NAPJ-1074, Tape input/output terminal pc board ass'y
U3	12549575	NASW-1075, Rec. selector switch pc board ass'y
U4	12549576	NASW-1076, Input selector pc board ass'y
U5	12549577	NAAF-1077, Pre., and power amplifier pc board ass'y
U6	12549578	NAVR-1078, Balance control pc board ass'y
U7	12549579	NAVR-1079, Volume control pc board ass'y
U8	12549580	NASW-1080, Speaker selector pc board ass'y
U9	12549581	NAPS-1081, Power supply pc board ass'y
U10	12549582	NALED-1082, Speaker indicator pc board ass'y
U11	12549583	NASW-1083, Switch circuit pc board ass'y
U12	12549585	NADIS-1085, Output power indicator pc board ass'y
U13	12549586	NAME-1086, Output power indicator driver circuit pc board ass'y
U14	12549587	NALED-1087, Cartridge selector indicator pc board ass'y
W901	253083	AS-CEE, Power supply cable
W901a	270280	SR-4K-4, Strainrelief

(G): Only 220V model
(W): Only 120/220V model

PRINTED CIRCUIT BOARD-PARTS LIST

EQUALIZER AMPLIFIER PC BOARD (NAEQ-1073) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	ICs	
Q101, Q201	222594	HA12017
	Capacitors	
C102, C202	352751009	10μF, 25V, Elect.
C105, C205	352724719	470μF, 6.3V, Elect.
C108, C208	379126824	6,800pF ± 5%, 50V, DEW
C109, C209	379122034	0.022μF ± 5%, 50V, DEW
C110, C210	352780109	1μF, 50V, Elect.
C112, C213	352780109	1μF, 50V, Elect.
	Switch	
S101A	25065156	NSS-8371, MC/MM selector
	Terminals	
P101	25045087	NPJ-2PDBL44, Phono input
P301	25045087	NPJ-2PDBL44, Tuner input

TAPE INPUT/OUTPUT TERMINAL PC BOARD (NAPJ-1074) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
P302, P303	25045074	NPJ-4PDBL37, Tape input/output terminal

REC. SELECTOR SWITCH PC BOARD (NASW-1075) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
S301	25030190	NRSM-145-305S, Rec. selector switch

INPUT SELECTOR SWITCH PC BOARD (NASW-1076) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
S302	25035247	NPS-442-L211, Input selector switch
PL301–PL304	210080	PL14V0.06AE-0.5, Input indicator lamp

PRE., POWER AMPLIFIER AND PROTECTOR CIRCUIT PC BOARD (NAAF-1077) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	IC	
Q313, Q413	222502 or 222597	NJM4558DX or NJM4559DN
	Transistors	
Q301, Q401	2211915 or 2211916	2SK240(GR) or 2SK240(BL)
Q302, Q402] Q303, Q403]	2211255 or 2211256	2SC1815(GR) or 2SC1815(BL)
Q304, Q404	2211515 or 2211516	2SA995(F) or 2SA995(G)
Q305, Q405	2211454 or 2211455	2SA1015(Y) or 2SA1015(GR)
Q306, Q406	2211742	2SA915(L)
Q307, Q407	2211762	2SC1940(L)
Q308, Q408	2211256 or 2211255	2SC1815(BL) or 2SC1815(GR)
Q309, Q409	2211924 or 2211923	2SC2824(Y) or 2SC2824(O)
Q310, Q410	2211934 or 2211933	2SA1184(Y) or 2SA1184(O)
Q311, Q411	2201103 or 2201102	2SD845(O) or 2SD845(R)
Q312, Q412	2201093 or 2201092	2SB755(O) or 2SB755(R)
Q901	2200664 or 2200663	2SC1626(Y) or 2SC1626(O)
Q902	2200674 or 2200673	2SA816(Y) or 2SA816(O)
Q903, Q905	2211255 or 2211256	2SC1815(GR) or 2SC1815(BL)
Q904	2211455 or 2211454	2SA1015(GR) or 2SA1015(Y)
Q906	2211164 or 2211544	2SC2120(Y) or 2SC1959(Y)
	Diodes	
D302, D303	4000068	VD1222

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D402, D403	4000068	VD1222
D304, D909	223133 or	DS442X or
D910, D912	223105	1S1555
D907, D908	224065	05Z18U, Zener
	Lamp	
	210121	PL14V0.06AW2.5
	Capacitors	
C312, C412	379121035	0.01μF ± 10%, 50V, DEW
C317, C417	379121025	0.001μF ± 10%, 50V, DEW
C319, C419	379121035	0.01μF ± 10%, 50V, DEW
C322, C422	352781009	10μF, 50V, Elect.
C323, C423	352781009	10μF, 50V, Elect.
C326–C331	352751009	10μF, 25V, Elect.
C426–C429	352751009	10μF, 25V, Elect.
C906, C907	352761019	100μF, 35V, Elect.
C908–C911	352751019	100μF, 25V, Elect.
C912	352742219	220μF, 16V, Elect.
C913	352743309	33μF, 16V, Elect.
C914	352741029	1,000μF, 16V, Elect.
C915	352741009	10μF, 16V, Elect.
	Resistors	
R309, R409	431421565	15MΩ, 1/4W, Solid
R311, 315	5148070	N16RGM-11C-110K180K30M,
R411, R415		Bass control variable
R312, R412	431421565	15MΩ, 1/4W, Solid
R318, R418	5148069	N16RGM-11C-220K30M, Treble control variable
R320, R420	431421565	15MΩ, 1/4W, Solid
R321, R421	431421565	15MΩ, 1/4W, Solid
R339, R439	5225072	N10HR4.7KBDM, Semi-fixed
R341, R441	441522214	220Ω, 1/2W, Metal oxide film
R342, R442	441720104	1Ω, 2W, Metal oxide film
R344, R444	4000047	0.47Ω, 5W, Metal plate
R345, R445	4000047	0.47Ω, 5W, Metal plate
R346, R446	441621004	10Ω, 1W, Metal oxide film
R901	441521514	150Ω, 1/2W, Metal oxide film
R902	441522214	220Ω, 1/2W, Metal oxide film
R903, R904	441523324	3.3kΩ, 1/2W, Metal oxide film
R911	441522204	22Ω, 1/2W, Metal oxide film
R913	441521004	10Ω, 1/2W, Metal oxide film
	Switches	
S303–S306	25035246	NPS-422-L210, Load/Mode/ Hi-filter/Loudness
	Relay	
RL901	25065140	NRL-2P5A-DC12-06
	Lamp	
	210081	PL14V0.06AW2.4

BALANCE CONTROL PC BAORD (NAVR-1078) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
R310, R410	5148068	N16RGM-C-500KMN-30, Balance control variable resistor

VOLUME CONTROL PC BOARD (NAVR-1079) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
R322, R422	5148067	N16RGM-41C-100KBTP35, Volume control variable resistor

SPEAKER SWITCH PC BAORD (NASW-1080) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
L301, L401	231001	S-1.3B, Coil
R351, R451	441520564	5.6Ω, 1/2W, Metal oxide film resistor
R352, R452	441623314	330Ω, 1W, Metal oxide film resistor
S307, S308	25035250	NPS-142-162-L214, Speaker selector switch

POWER SUPPLY PC BOARD (NAPS-1081) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	Diodes	
D901–D904	223863	GP30DL
D905, D906	223804 or	SR1K-2 or
	223843	GP08B
	Capacitor	
C905	352742229	2,200μF, 16V, Elect.
	Fuses	
F301, F401	252059	4A (ST-6), Speaker protection
	Fuseholder	
F301a, F401a	250113	SN5051

SPEAKER INDICATOR PC BOARD (NALED-1082) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	225047	SLP251B, L.E.D

SWITCH PC BOARD (NASW-1083) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
R353, R453	431526815	680Ω, 1/2W, Solid resistor

OUTPUT POWER INDICATOR PC BOARD (NADIS-1085) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
Q502, Q602	222621	IR2431, IC
D506, D606	225068	GL-112V13, L.E.D

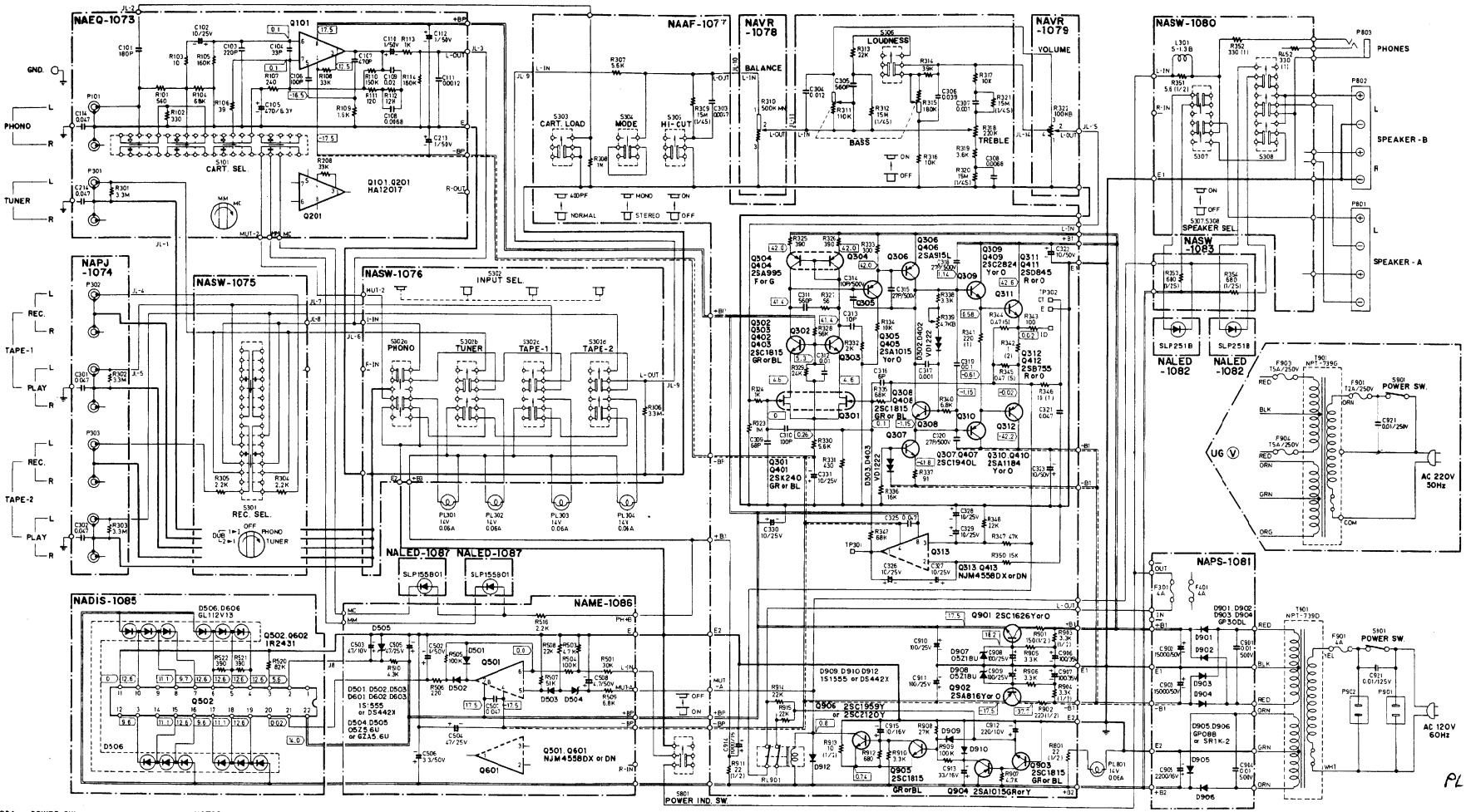
OUTPUT POWER INDICATOR DRIVER PC BOARD (ANME-1086) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	IC	
Q501, Q601	222502	NJM-4558DX
	Diodes	
D501, D503	223133 or	DS442X or
D507	223105	1S1555
D504, D505	224096 or	GZA5.6-U or
	224041	05Z5.6-U
D601–D603	223133 or	DS442X or
	223105	1S1555
	Capacitors	
C502, C602	352780109	1μF, 50V, Elect.
C503	352734709	47μF, 10V, Elect.
C504, C505	352754709	47μF, 25V, Elect.
C506	352780339	3.3μF, 50V, Elect.
C508	352780479	4.7μF, 50V, Elect.
	Resistor	
R502	5215021	N08HR10KBD, Semi-fixed

CARTRIDGE SELECTOR INDICATOR PC BOARD (NALED-1087) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	225082	SLP-155B-01, L.E.D.

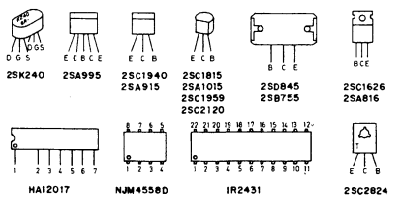
SCHEMATIC DIAGRAM

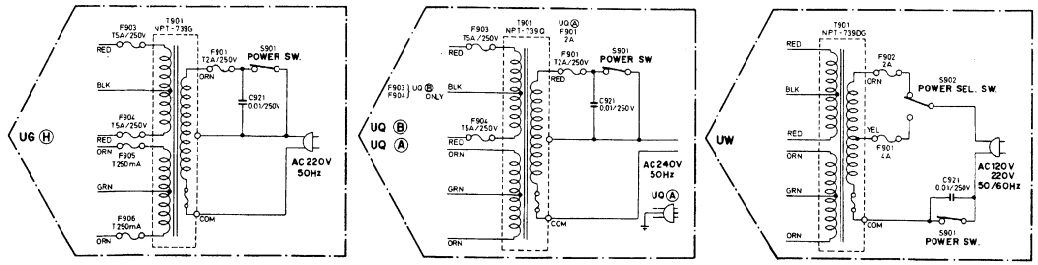


PL801 210121

S901	POWER SW.	ON
S101	CART. SEL.	MM
S301	REC. SEL.	OFF
S302	INPUT SEL.	PHONO
S303	CART. LOAD SEL.	NORMAL
S304	MODE SEL.	STEREO
S305	HI-CUT SEL.	OFF
S306	LOUDNESS SEL.	OFF
S307	SPEAKERS SEL.	ON
S308	SPEAKERS SEL.	OFF
S801	POWER IND. SW.	ON
UW TYPE ONLY		
S902	POWER SEL. SW.	220V

NOTES:
- ALL RESISTORS ARE IN OHMS, 1/4 WATT UNLESS NOTED.
- ALL CAPACITORS ARE IN μF 50WV UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (—||—) ARE IN μF/WV.
- VOLTAGE (MEASURED WITH V.T.V.M.)
- V DC VOLTAGE (NO INPUT SIGNAL).





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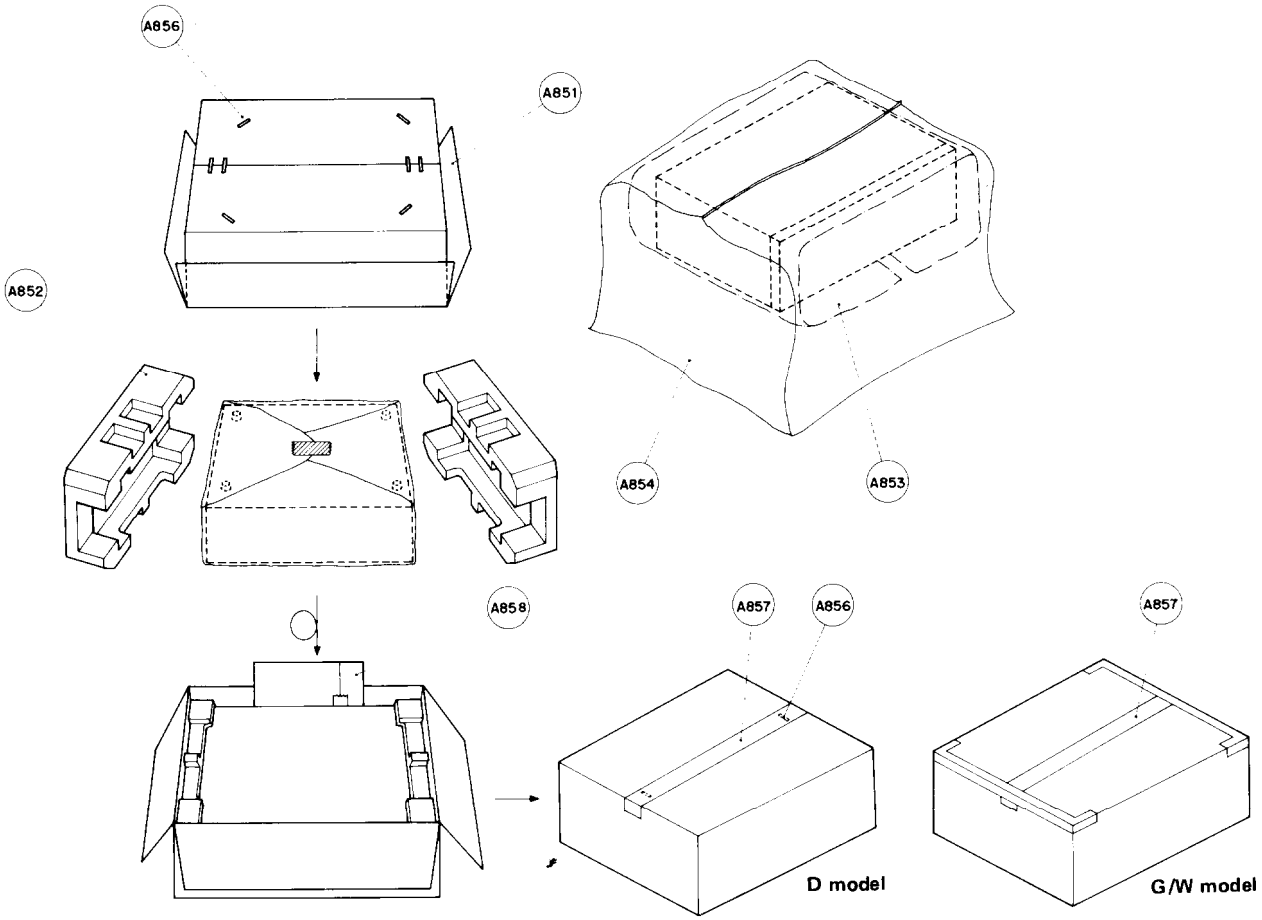
PACKING PROCEDURES



D model

REF. NO.	PARTS NO.	DESCRIPTION
A851	29050439	Master carton box
A852	29090398A	Pad
A853	29095012-1	500x800, Protection sheet
A854	29100036	850x550mm, Poly bag
A856	282301	Sealing hook
A857	260012	50x180cm, Tape, damplon
A858	29100006	250x350mm, Poly bag
	29340494	Instruction manual
	29365006	Warranty card (N)
	29358002	List, service station (N)

(N): Only U.S.A. model

G/W model

REF. NO.	PARTS NO.	DESCRIPTION
A851	29050439	Master carton box
A852	29090398A	Pad
A853	29095012-1	500x800, Protection sheet
A854	29100036	850x550mm, Poly bag
A855	261504	30x150mm, Tape
A856	282301	Sealing hook
A857	260012	50x180cm, Tape, damplon
A858	29100006	250x350mm, Poly bag
A881	29340495	Instruction manual
	29365005-2	Warranty card (G)
	29358002	CV-K-1, Conversion plug (W)

(W): Only 120/220V model
(G): Only Germany model

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